

REMARKS

In the Final Office Action under reply, The National Instruments User Manual (“Computer-Based Instruments NI 5911 User Manual Digial Oscilloscope for PCI”) and National Instruments Quick Reference Guide (“NI-SCOPE Instrument Driver Quick Reference Guide”) (collectively hereinafter, “National Instruments”) were relied upon to reject all of the claims. National Instruments was used by itself to reject claims 2-6, 11, 23-27, 32 and 43-49 as allegedly being obvious. National Instruments was combined with Shirai (U.S. Patent 5,736,971) to reject claim 13 (it is noted that, in discussing the rejection of claim 13, the Examiner refers to U.S. Patent 5,301,336 to Kodosky, but does not apply Kodosky to this claim).

It is respectfully submitted, claims 2-6, 11, 13, 23-27, 32 and 43-49, as previously presented, were patentably distinct over National Instruments, with or without Shirai. Nevertheless, in an effort to expedite the prosecution of this application to its successful conclusion, and to make explicit that which was clearly inferred but, apparently, was fully recognized, the independent claims, namely, claims 43, 45 and 47, are amended to make clear that an upstream processing element does not even begin to process the waveform data it receives until it gets a request for processed data from a downstream processing element; and, furthermore, the request is sent to the upstream processing element from the downstream processing element that has its update input activated, and not all processing elements have an update input. This feature is particularly recited in all of the independent claims, of which claim 43 is illustrative:

less than all of said processing elements having update inputs activated to process the waveform data received thereby;

wherein at least one of said plurality of processing elements having an update input responds to the activation of said update input to request processing from an upstream one of said plurality of processing elements that does not have an update input and that is idle until receipt of said request, so that upon said request, the upstream processing element performs said requested processing to process a received waveform data, and provide the processed waveform data to the at least one requesting processing element.

This feature, as well as other features recited in the independent claims, is not suggested in the National Instruments literature. That is, National Instruments does not show or suggest that when the update input of a downstream element is activated, that element sends to an upstream element that does not have an update input a request for data. The upstream element that receives that request is idle until that request is received and then initiates processing of data that is sent to the downstream element. There is no processing and storage (e.g. in a buffer) of data by an upstream element, waiting for a downstream element to request that data. Processing is not initiated until the request for processed data is received. For this reason alone, Claim 43, as well as claims 45 and 47 that include similar recitations, should be found allowable over National Instruments.

There is yet another reason why National Instruments does not suggest to one of ordinary skill in the art the method of Applicants' claim 43 or the graphical processing web of claims 45 and 47. Claim 43 calls for "graphically connecting said plurality of processing elements to define a processing web." Claim 45 and 47 recite "graphically indicated connections." It is submitted that one who reads and understands the National Instruments literature would not be enabled thereby to graphically connect processing elements and would not observe graphically indicated connections. The Quick Reference Guide does not describe graphical elements, e.g. buttons, that can be selected and interconnected by a user. The footnotes at page of the Guide refer to programming languages (e.g. C, C++, LabWindows/CVI, Visual Basic) that are text-

based languages as opposed to graphically-based tools. The Guide does not describe a graphical process flow programming environment. Although Fig. 8 of the Guide is entitled "Programming Flow," it is speculative to contend that this illustrates what is displayed to a user for manipulation and interconnection of processing elements. Rather, Fig. 8 simply illustrates the relationship among different subroutines. There is no suggestion that the user has the ability to pick and choose among the illustrated subroutines, interconnect selected ones to create a particular program and then display the selected interconnections.

Therefore, after reading and understanding the National Instruments literature, one of ordinary skill in the art would not be enabled thereby to make and use the graphical processing web defined by claims 45 and 47 or the method for configuring and performing processing as defined by claim 43. Accordingly, the allowance of these claims is respectfully solicited.

Claims 2-6, 11, 13 and 44 depend from claim 43. Claims 23-27, 32 and 46 depend from claim 45. Claims 48 and 49 depend from claim 47. Since the dependent claims include all of the limitations recited by the independent claim from which they depend, and since the independent claims are patentably distinct over National Instruments, with or without Shirai, it follows that the dependent claims likewise are patentable and in condition for allowance.

Statements appearing above in respect to the disclosures in the cited references represent the present opinions of the undersigned attorney and, in the event the Examiner disagrees with any of such opinions, it is respectfully requested that the Examiner specifically indicate those portions of the references providing the basis for a contrary view.

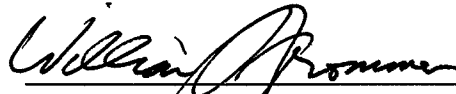
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Early and favorable consideration is respectfully requested.

Respectfully submitted,

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